



Data Analyst Experience Redesign

Pitch Deck

Timeline: 6 Weeks

Dates: Oct - Dec 2024

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Huang (UX Designer)

Mentor: Regine Gilbert

Clients: Mary Kay Severino, Dr. Trae
Winter, ARISA Lab

Tools:



The Problem

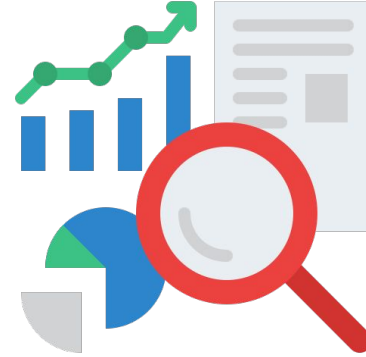
The Data Analyst experience for the Eclipse Soundscapes Project **is not accessible** for individuals who are blind or low vision, yet needs to remain visually engaging for all participants.



The Question

How can we redesign this interface to be accessible and inclusive, and enable meaningful participation for people *regardless* of their visual abilities?





Research

Market Analysis & User Needs



1

Market Research

Competitive Analysis



Market Analysis

Competitor #1



Microsoft Soundscapes

audio-based app to enhance navigation/spatial awareness for blind or low vision.

Market Analysis

Competitor #2

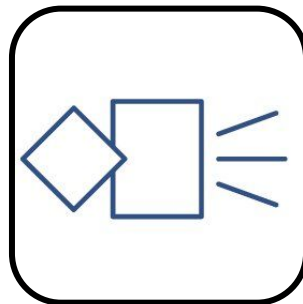


Diagram Center

initiative that improves accessibility of educational materials,
for blind, low vision, or learning disabilities.

Market Analysis

Competitor #3



American Foundation for the Blind

nonprofit that advocates, provides resources and assistive tech for the blind and low vision.

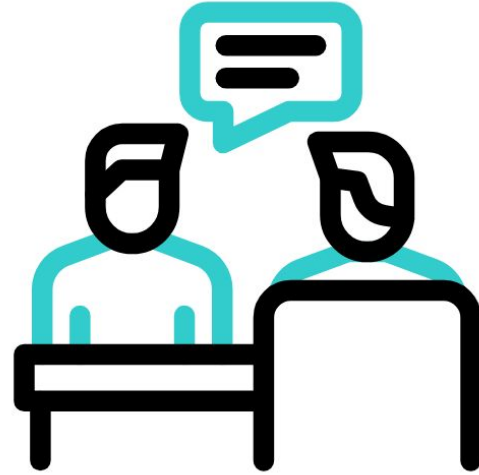
Market Analysis: **Key Findings**

- Icons are hard to read, and unreliable. Reduce dependence on icons and add supplemental text.
- Screen-reader friendly sites have columns that contain the top links for easy access.
- Ensure all interface elements are properly labeled with descriptive/alternate text that screen readers can interpret.
- Audio players are best accessible with clear view of playback time and volume levels

2

User Research

6 Interviews



User Research: Interviews

Interviewees ranged from 15-25 yrs old, with a type of colorblindness and/or blind since birth.

1. “Walk me through how you navigate web forms, step by step.”
2. “Think of a satisfying digital user experience you had on any platform. What visual or structural elements did you like about it?”
3. “Which form elements do you find confusing or inaccessible?”

User Research: Key Observations

- **It's common to skim web forms**, most important information first, or give option to skip to content.
- Don't skip **heading tags**.
- **Uppercase text** is harder to read because the shapes of all the uppercase letters are all rectangular and users are not used to reading text that way
- Steer away from **dropdowns & other website pre-built HTML functions**.
- No complete reliance on icons.



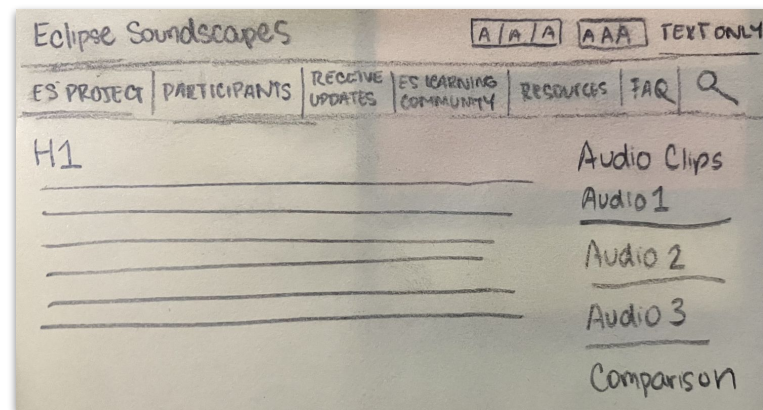
Ideation

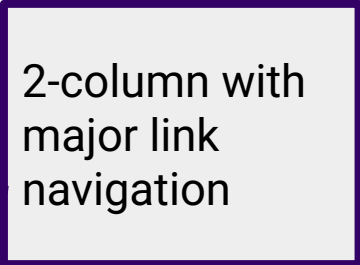
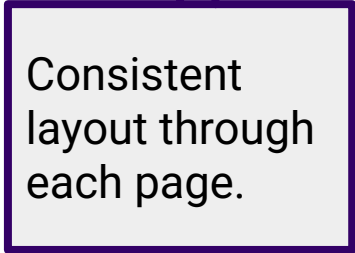
Feature Prioritization & Sketches



Feature Prioritization

- **Designing for necessary content first.**
 - ◆ Key information (like accessibility controls) should be easily accessible.
- **High Contrast Visual Design**
 - ◆ Easy readability.
- **Two-columned design for perusal**
 - ◆ Easy for users to skim and navigate to major links by keyboard.
- **Audio controls without dropdowns.**
- **Consistent screen layout**





Accessibility controls on top



Testing

Feedback and Changes



Feedback: Navigation Bar

Color language should be **consistent** and **match** the style guide

ES Project

Participants

Resources

FAQ

Learning Community

Contact Us



ES Project

Participants

Resources

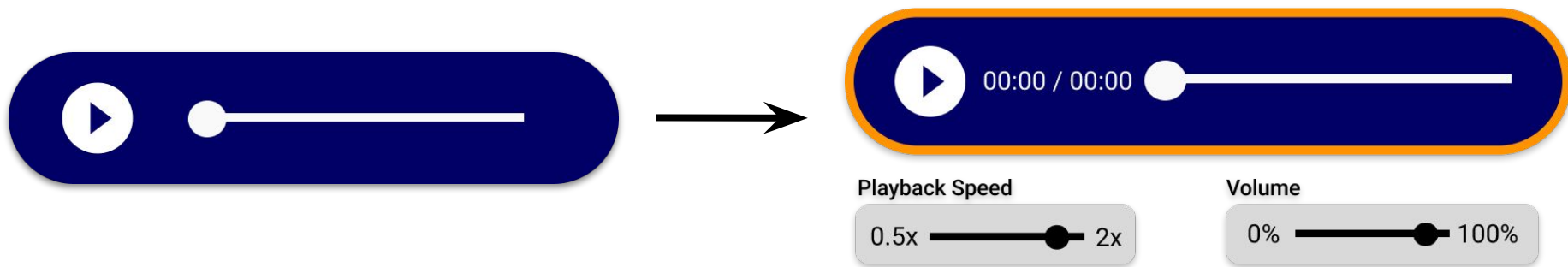
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Feedback: Audio Clips

Audio players should have **clear access** of playback time and volume levels.



Feedback: Header

Logos should **not be alone** . Best to start with a **solid heading** text, at least supplementary.



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A+

TEXT ONLY

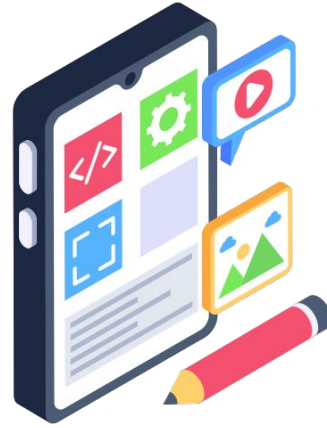


Eclipse Soundscapes

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Final Designs

User-tested Products



Designs

 **Eclipse Soundscapes**

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Data Analyst

On this page, ES Data Analysts will learn how to analyze sounds by listening to example clips before exploring three audio recordings from sites on the 2023 Annular Eclipse and the 2024 Total Solar Eclipse paths. Was there a change on the eclipse day? Was it due to birds, insects, people, or something else? Listen closely and make your own observations—your contributions are an important part of NASA science, adding valuable insights into eclipse effects on the natural world. For those interested, there's also additional information about soundscapes and how they're studied!



[How to Analyze ES Soundscapes](#) [Sounds Examples](#) | [Analyze 2023 Data](#) | [Analyze 2024 Data](#) | [Learn about Soundscapes](#) | [Computer Analysis](#)

Overview of the Analysis Process

Add Onboarding info here to walk a user through the data analysis process for a site

Eclipse Soundscapes is an enterprise of [ARISA Lab, LLC](#) and is supported by NASA award No. 80NSSC21M0008.

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Thank you!